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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,640	12/07/2000	Joshua I. Pine	044368.0371	9957
25700	7590	11/30/2005	EXAMINER	
FARJAMI & FARJAMI LLP 26522 LA ALAMEDA AVENUE, SUITE 360 MISSION VIEJO, CA 92691			HENN, TIMOTHY J	
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/731,640

Applicant(s)

PINE, JOSHUA I.

Examiner

Timothy J. Henn

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 15-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 15-19 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12 September 2005 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3, 4, 15, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Kostrzewski et al. (IEEE).

**[claim 1]**

Regarding claim 1, Kostrzewski discloses an imaging system comprising: a first imager configured to capture an image of an object in a spatial domain and generate first spatial-domain image data, wherein the object is illuminated by an incoherent light source (e.g. visible light; Figure 1; Section 2, "visible-wavelength CCD cameras"); a spatial light modulator configured to receive the first spatial-domain image data and a beam of coherent light (e.g. laser light), and generate diffracted light rays (Figure 1, "Input SLM"; Section 2); a transform lens configured to transform the diffracted light rays into a diffraction pattern (Figure 1, "Fourier lens"; Section 2); a second imager having an array of photocells wherein the second imager is configured to capture the diffraction pattern in a spatial frequency domain and generate spatial frequency-domain image data (Figure 1, "CCD camera"; Section 2); and an image processor that receives the spatial frequency-domain image data from the second imager and transforms the spatial-frequency domain image data into a second spatial-domain image data (Figure 1, "DSP chip"; Section 2).

**[claim 3]**

Regarding claim 3, Kostrzewski discloses a user interface comprising a display (Figure 1; "Host computer"). The examiner notes that apparatus claims must be distinguished from the prior art in terms of structure rather than function (see MPEP §2114).

**[claim 4]**

Regarding claim 4, Kostrzewski discloses a transform lens which performs an approximate Fourier transform on the diffracted light rays (Figure 1, "Fourier lens";

Section 2).

**[claims 15 and 18]**

Claims 15 and 18 are method claims corresponding to apparatus claims 1 and 4. Therefore, claims 15 and 18 are analyzed and rejected

**[claim 17]**

Regarding claim 17, Kostrzewski discloses transferring the spatial frequency-domain image data to an image processor, the image processor inverse Fourier transforming the data into second spatial domain image data (Figure 1, "DSP chip"; Section 2).

***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 2 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kostrzewski et al. (IEEE) in view of Nagumo (US 4,189,751).

**[claim 2]**

Regarding claim 2, Kostrzewski discloses all limitations except for a noise filter to remove noise from the image. Nagumo discloses a noise removal system connected to the output of a CCD imager to remove noise caused by inconsistencies which are inherent due to the manufacturing variations of solid-state image sensors by detecting and removing noise signals from captured image data (e.g. Figure 2; Column 1, Line 31 - Column 2, Line 19). It would have been obvious to one of ordinary skill in the art at the

time the invention was made to capture and remove the undesirable noise signals as taught by Nagumo to improve the quality of the captured image.

**[claim 16]**

Claim 16 is a method claim corresponding to apparatus claim 2. Therefore, claim 16 is analyzed and rejected as previously discussed with respect to claim 2.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kostrzewski (IEEE).

**[claim 19]**

Regarding claim 19, Kostrzewski does not specifically disclose storing the second spatial-domain image data. Official Notice is taken that it is notoriously well known in the art to store processed images created by imaging systems for later display or processing. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to store the image created by the system of Kostrzewski for later display or processing.

***Allowable Subject Matter***

8. Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**[claim 20]**

Regarding claim 20, the prior art does not teach or fairly suggest a method as claimed wherein both processed spatial domain image data and a diffraction pattern are displayed. While it is well known to display image data from imaging systems, displaying both second spatial-image data and the diffraction pattern from which it is obtained is not.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Henn whose telephone number is (571) 272-7310. The examiner can normally be reached on M-F 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc Yen Vu can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJH

  
NGOC-YEN VU  
PRIMARY EXAMINER